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10/750,345	12/31/2003	Timothy W. Vanderveen	IVACP 58212	9475
24201 7590 04/28/2009 FULWIDER PATTON LLP HOWARD HUGHES CENTER 6060 CENTER DRIVE, TENTH FLOOR LOS ANGELES, CA 90045				
EXAMINER				
HALL, DEANNA K				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/750,345  
Filing Date: December 31, 2003  
Appellant(s): VANDERVEEN ET AL.

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Ahsan A. Shaikh  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed March 9, 2009 appealing from the Office action mailed April 21, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The amendment after final rejection filed concurrently with the appeal brief on March 9, 2009 has been entered.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

#### **WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. The rejection of claims 12-15 is withdrawn due to the cancellation of claims 12-15 by way of the after final amendment filed March 9, 2009.

#### **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### **(8) Evidence Relied Upon**

6,213,972	BUTTERFIELD	4-2001
5,032,112	FAIRCHILD	7-1991
5,087,245	DOAN	2-1992

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-11 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butterfield et al. (US 6,213,972) ("Butterfield") in view Fairchild et al. (US 5,032,112) ("Fairchild") further in view of Doan (US 5,087,245).

Butterfield discloses a system for determining a fault condition in an infusion system providing a primary infusion 152a and a secondary infusion 152b, the infusion system including an infusion pump 16a capable of infusing fluid from a primary container 22a connected to a primary infusion line 12a and a secondary container 22b connected to the primary infusion line through a secondary infusion line 12b, the secondary infusion line having a valve 16b to control flow of the secondary fluid in the secondary fluid line. See Fig. 17.

Butterfield further discloses a pressure sensor 34c disposed adjacent the primary infusion line 12a below the connection of the secondary infusion line to the primary infusion line, the pressure sensor in operative arrangement with the primary infusion line to measure pressure within the primary infusion line C26 L62- C27 L6.

Butterfield further discloses a processor 30 responsive to the signals provided by the pressure sensor to establish a baseline pressure value and provide an alert 40 that a fault condition exists. C6 L15-27. The processor can further operate the infusion pump to increase the pressure in the primary infusion line and sample the pressure signals after operating the pump to compare these values with the baseline pressure value to provide an alert. C4 L25-53.

Butterfield further discloses the processor only comparing values that were obtained during a time measurement window. C8 L12-23. The processor can operate in a reverse mode to inject a bolus of fluid into the primary infusion line followed by sampling pressure signals and comparing to threshold values to determine if a fault condition

exists. C2 L14-16, C6 L66-C7 L10, C7 L63-C8 L23. An electromechanical actuator 20 squeezes and releases the upstream infusion line to increase the pressure

Although Butterfield discloses the invention as substantially claimed, Butterfield does not directly disclose the primary infusion line having a check valve disposed between the primary container and the connection of the secondary infusion line to the primary infusion line. Fairchild, in the analogous art, teaches a check valve 42 between the primary container and the connection of the secondary infusion line to the primary infusion line, Fig. 1. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the device of Butterfield with the check valve as taught by Fairchild for preventing the flow backwards from the primary infusion line into the primary container. Regarding claims 10-11, Fairchild further teaches a controllable pressure application device 54 (roller clamp in Fig. 1) for applying pressure to the primary infusion line. This type of manual pressure application device could also be interpreted to be an automatic part of the pump mechanism 16b of the secondary infusion 152b of Butterfield that responds to signals from the processor 30b to apply pressure to the primary infusion line.

Further, Butterfield does not directly disclose a memory for storing pressure related values. Doan, in the analogous art, teaches a memory 26 for storing pressure related values. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the device of Butterfield with the memory as taught by Doan for associating the processor with a memory.

**(10) Response to Argument**

Applicant argues that Butterfield does not teach or suggest a pressure sensor that is both (1) disposed adjacent the primary infusion line below the connection of the secondary infusion line to the primary infusion line, and (2) in operative arrangement with the primary infusion line to measure pressure within the primary infusion line.

Examiner's position is that, as explained in the previous final rejection, Butterfield discloses a primary infusion line 12a and a secondary infusion line 12b that connect 12c as shown in Fig. 17. Butterfield discloses a pressure sensor 34c (see Fig. 17) both located below the connection 12c and that can measure pressure within the primary infusion line as explained at C26 L62- C27 L6. Butterfield discloses that the pressure sensor 34c can be placed in the common conduit 12c and not necessarily in the immediately adjacent fluid conduit in order to measure pressure within the primary infusion line. It would have been obvious to one of ordinary skill in the art to place the pressure sensor below the connection point of the primary infusion line and the secondary infusion line based on the teachings of Butterfield to do so.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Deanna K. Hall/

Examiner, Art Unit 3767

Conferees:

/Kevin C. Simons/

Supervisory Patent Examiner, Art Unit 3767

/Janet C. Baxter/  
TC 3700 TQAS